

We claim:

1. A method for the generation of HLA-haploidentical antigen-presenting cells for the treatment of tumor diseases in a patient comprising the following steps:
 - providing antigen-presenting cells from a donor which are HLA-haploidentical with respect to those of the patient;
 - introducing proteins and/or peptides or RNA or DNA or cDNA encoding said proteins and/or peptides which are overexpressed in tumor cells or are derived from autologous tumor cells are introduced into the HLA-haploidentical antigen-presenting cells.
2. The method according to claim 1 wherein proteins and/or peptides or RNA or DNA or cDNA, respectively, encoding said proteins and/or peptides from several different tumor cell lines are introduced into the HLA-haploidentical antigen-presenting cells.
3. The method according to claim 1 characterized in that first RNA from tumor cells is reverse transcribed into cDNA, the cDNA is amplified by means of PCR and subsequently the cDNA is transcribed into RNA.
4. The method according to claim 1 wherein antigen-presenting cells of two different HLA-haploidentical individuals are used.
5. The HLA-haploidentical antigen-presenting cells obtained by a method according to claim 1.
6. The HLA-haploidentical antigen-presenting cells according to claim 5 characterized in that said proteins and/or peptides or RNA or DNA or cDNA encoding said proteins and/or peptides which are overexpressed in tumor cells or are derived from autologous tumor cells are selected from the following tumor cells: carcinomas, preferably ovarian, mammary and renal cell carcinomas, tumor cells of the hematopoietic system, preferably cells of leukemias and lymphomas, cells of mesenchymal tumors, preferably sarcomas, cells of epithelial tumors, cells of ectodermal tumors, preferably melanomas, and cells of embryonic tumors from undifferentiated tissue, preferably blastomas and teratomas.

7. The HLA-haploidentical antigen-presenting cells according to claim 5 containing proteins and/or peptides or-RNA or DNA or cDNA encoding said proteins and/or peptides from several different tumor cell lines.

8. The HLA-haploidentical antigen-presenting cells according to claim 5 characterized in that said antigen-presenting cells are dendritic cells or macrophages.

9. A pharmaceutical composition containing HLA-haploidentical antigen-presenting cells according to claim 5.

10. A composition according to claim 9 characterized in that it is a vaccine.

11. A method of treatment of tumor diseases in a patient comprising administering a therapeutically effective amount of the HLA-haploidentical antigen-presenting cells according to claim 5 to said patient.

12. The method according to claim 11 characterized in that said HLA-haploidentical antigen-presenting cells are used for the treatment of tumors comprising: carcinomas, preferably ovarian, mammary and renal cell carcinomas, tumors of the hematopoietic system, preferably leukemias and lymphomas, mesenchymal tumors, preferably sarcomas, epithelial tumors, ectodermal tumors, preferably melanomas, and embryonic tumors from undifferentiated tissue, preferably blastomas and teratomas.

13. The method according to claim 11 characterized in that HLA-haploidentical antigen-presenting cells of two different HLA-haploidentical individuals are used.

14. The method according to claim 13 characterized in that RNA is employed which has been reverse transcribed from autologous tumor cells into cDNA, the cDNA has been amplified by means of PCR and subsequently the cDNA has been transcribed into RNA.

15. The method according to claim 11 characterized in that said HLA-haploidentical antigen-presenting cells are applied by the intravenous, subcutaneous or intramuscular route.

16. The method of claim 11, wherein, into the HLA-haploidentical antigen-presenting cells, proteins and/or peptides or RNA or DNA or cDNA, respectively, encoding said proteins and/or peptides overexpressed in tumor cells or are derived from autologous tumor cells have been introduced in recombinant form.

17. The method according to claim 11 characterized in that RNA or DNA or cDNA is introduced into the HLA-haploidentical antigen-presenting cells which encodes tumor-defined antigens, wherein the tumor-defined antigens are antigens overexpressed in the tumor cells and are preferably selected from oncogenes, preferably HER2/neu, proteins providing a growth advantage to the tumor and/or ensuring its survival, preferably PSMA, cell cycle regulatory proteins, transcription factors, preferably WT-1, mucins, preferably MUC-1, proteins involved in the regulation of cell division, preferably telomerase.

18. The method according to claim 11 characterized in that said antigen-presenting cells are dendritic cells or macrophages.

19. The method of claim 11, wherein, into the HLAhaploidentical antigen-presenting cells, proteins and/or peptides or RNA or DNA or cDNA encoding said proteins . and/or peptides from several different tumor cell lines have been introduced for the treatment of tumor diseases in said patient.

20. The method according to claim 19 wherein pooled cRNA from two or three different tumor cell lines is introduced.